

AMENDMENT TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) A photovoltaic device comprising a photovoltaic element, the photovoltaic element comprising:

a first conductivity type single crystalline silicon semiconductor layer;

a substantially intrinsic non-single-crystalline semiconductor layer formed on the first conductivity type single crystalline silicon semiconductor layer;

a transparent conductive oxide film formed on the substantially intrinsic non-single-crystalline semiconductor layer, wherein the transparent conductive oxide film has an arithmetic mean deviation of the profile of not more than about 2 nm;

a paste electrode formed on the transparent oxide film, wherein the paste electrode contains a metal material and a resin binder, the resin binder containing at least about 60 percent by weight and not more than about 80 percent by weight of epoxy resin; and

an electric wire connected to the paste electrode by solder,

wherein a surface of the transparent conductive oxide film has irregularities with a height, and wherein a surface of the first conductivity type single crystalline silicon semiconductor layer has irregularities higher than the height of the irregularities on the surface of the transparent conductive oxide film,

said transparent conductive oxide film contains SnO₂- added In₂O₃,

the content of Sn in said transparent conductive oxide film is not more than $[[2]] \leq$ percent by weight, $[[\text{and}]]$

the resin binder consists of urethane resin and the epoxy resin, and
said transparent conductive oxide film whose content of Sn is not more than 5 percent by
weight has an arithmetic mean deviation of the profile (Ra) of at least about 0.5 nm and not more
than 2 nm, and has a surface with respect to which a contact angle of water is at least about 40°
and not more than about 74°.

2. (Cancelled)

3. (Previously Presented) The photovoltaic device according to claim 1, wherein
said photovoltaic element includes a second conductivity type non-single-crystalline
semiconductor layer formed on said substantially intrinsic non-single-crystalline semiconductor
layer, and

said transparent conductive oxide film is formed on said second conductivity type non-
single-crystalline semiconductor layer.

4. (Previously Presented) The photovoltaic device according to claim 1, wherein
said substantially intrinsic non-single-crystalline semiconductor layer includes a
substantially intrinsic first non-single-crystalline semiconductor layer formed on the upper
surface of said first conductivity type single crystalline silicon semiconductor layer and a
substantially intrinsic second non-single-crystalline semiconductor layer formed on the lower
surface of said first conductivity type single crystalline silicon semiconductor layer,

said photovoltaic element includes a second conductivity type third non-single-crystalline semiconductor layer formed on the upper surface of said first non-single-crystalline semiconductor layer and a first conductivity type fourth non-single-crystalline semiconductor layer formed on the lower surface of said second non-single-crystalline semiconductor layer, and

said transparent conductive oxide film includes a first transparent conductive oxide film formed on the upper surface of said third non-single-crystalline semiconductor layer and a second transparent conductive oxide film formed on the lower surface of said fourth non-single-crystalline semiconductor layer.

5. (Cancelled)

6. (Previously Presented) The photovoltaic device according to claim 1, wherein said transparent conductive oxide film has arithmetic mean deviation of the profile of at least about 0.5 nm and not more than about 1 nm.

7-9. (Cancelled)

10. (Previously Presented) The photovoltaic device according to claim 1, wherein said metal material constituting said paste electrode is Ag.

11. (Cancelled)

12. (Previously Presented) The photovoltaic device according to claim 1, wherein

a plurality of said photovoltaic elements are provided at a prescribed interval, and

said paste electrode includes a first paste electrode formed on the upper surface of each said photovoltaic element and a second paste electrode formed on the lower surface of each said photovoltaic element,

wherein the electric wire has a first end connected to said first paste electrode formed on the upper surface of prescribed said photovoltaic element and a second end connected to said second paste electrode formed on the lower surface of another said photovoltaic element adjacent to said prescribed photovoltaic element.

13-22. (Cancelled)